

SEQUENCE LISTING

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JUN 28 2002

TECH CENTER 1600/2900



<110> Herman, Ira
Welch, Alice

<120> BETA-CAP73 CONTROL OF NORMAL AND
ABNORMAL CELL MIGRATION

<130> TUI-001CP

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<141> 2000-12-28

<150> 60/170,182
<151> 1999-12-10

<150> 09/733,818
<151> 2000-12-08

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Ile Leu Ala Lys Lys Gly Val Asn Pro Gly Lys Leu Asp Val Glu Gly
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Arg Ser Ala Phe His Val Val Ala Ser Lys Gly Asn Leu Glu Cys Leu
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cta caa aaa ctt cta cag tac aat tgt ccc act gaa cat gta gac ctg			748
Leu Gln Lys Leu Leu Gln Tyr Asn Cys Pro Thr Glu His Val Asp Leu			
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Gln Gly Arg Thr Ala Leu His Asp Ala Ala Met Ala Asp Cys Pro Ser			
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agc ata cag ctg ctc tgc gac cat ggg gcc tcg gtg aat gcc aaa gat			844
Ser Ile Gln Leu Leu Cys Asp His Gly Ala Ser Val Asn Ala Lys Asp			
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gta gat ggg cg ^g aca cca ctt gtt ctg gct acc cag atg tgt agg cca			892
Val Asp Gly Arg Thr Pro Leu Val Leu Ala Thr Gln Met Cys Arg Pro			
155	160	165	
aca ata tgt caa ctg ctg ata gat aga ggg gc ^g gat att aat tcc aga			940
Thr Ile Cys Gln Leu Leu Ile Asp Arg Gly Ala Asp Ile Asn Ser Arg			
170	175	180	
gac aaa caa aac agg act gct ctc atg cta gga tgc gag tat ggt tgc			988
Asp Lys Gln Asn Arg Thr Ala Leu Met Leu Gly Cys Glu Tyr Gly Cys			
185	190	195	
aaa gat gca gta gaa gtc tta atc aaa aac ggc gct gac gtg acc ttg			1036
Lys Asp Ala Val Glu Val Leu Ile Lys Asn Gly Ala Asp Val Thr Leu			
200	205	210	215
ctg gac gcc ctt ggc cat gac agt tct tac tat gca aga att ggt gac			1084
Leu Asp Ala Leu Gly His Asp Ser Ser Tyr Tyr Ala Arg Ile Gly Asp			
220	225	230	
aat ctg gac att cta acc tta ctg aag act gca tca gaa aat tcc aac			1132
Asn Leu Asp Ile Leu Thr Leu Leu Lys Thr Ala Ser Glu Asn Ser Asn			
235	240	245	
aaa ggg aga gaa ctt tgg aag aaa gga cca tct tta caa cag cga aat			1180
Lys Gly Arg Glu Leu Trp Lys Lys Gly Pro Ser Leu Gln Gln Arg Asn			
250	255	260	
ttg tct cag atg cta gat gaa gta aat acg aag tca aat cag agg gag			1228
Leu Ser Gln Met Leu Asp Glu Val Asn Thr Lys Ser Asn Gln Arg Glu			
265	270	275	
cat caa aac att cag gat ctg gag att gaa aat gaa gat ctg aaa gag			1276
His Gln Asn Ile Gln Asp Leu Glu Ile Glu Asn Glu Asp Leu Lys Glu			
280	285	290	295
aga ttg aga aaa att cag caa gaa cag aga ata tta ttg gat aaa gtc			1324
Arg Leu Arg Lys Ile Gln Gln Glu Gln Arg Ile Leu Leu Asp Lys Val			
300	305	310	
aat ggt tta cag cta cag ctg aat gag gaa gta atg gtg gct gat gat			1372
Asn Gly Leu Gln Leu Gln Leu Asn Glu Glu Val Met Val Ala Asp Asp			

315	320	325	
ctg gaa agt gag aaa gaa aag	ctg aag tcc ctt ttg gca gcc aaa gaa		1420
Leu Glu Ser Glu Lys Glu Lys	Leu Lys Ser Leu Leu Ala Ala Lys Glu		
330	335	340	
aag cag cat gaa gaa agc cta aga act att gag gct	ctg aaa agt aga		1468
Lys Gln His Glu Glu Ser Leu Arg Thr Ile Glu Ala Leu Lys Ser Arg			
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Phe Lys Tyr Phe Glu Ser Asp His Leu Gly Ser Gly Ser His Phe Arg			
360	365	370	375
aaa gaa gat atg ctt ctt aaa caa ggt caa atg tac atg	aca gac tca		1564
Lys Glu Asp Met Leu Leu Lys Gln Gly Gln Met Tyr Met Thr Asp Ser			
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Gln Cys Thr Ser Thr Gly Met Pro Val His Met Gln Ser Arg Ser Met			
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Leu Arg Pro Leu Glu Leu Ala Leu Pro Asn Gln Ala Ser Tyr Ser Glu			
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Asn Glu Ile Leu Lys Lys Glu Leu Glu Ala Met Arg Thr Phe Cys Asp			
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tca gca aaa caa gac aga ctc aaa ctc caa aat gaa ctg gct cac aag			1756
Ser Ala Lys Gln Asp Arg Leu Lys Leu Gln Asn Glu Leu Ala His Lys			
440	445	450	455
gtg gcg gag tgc aag gcc tta gca ttg gaa tgt gaa agg gtg aaa gag			1804
Val Ala Glu Cys Lys Ala Leu Ala Leu Glu Cys Glu Arg Val Lys Glu			
460	465	470	
gat tca gat gag cag ata aag caa cta gaa gat gcc ttg aaa gac gtg			1852
Asp Ser Asp Glu Gln Ile Lys Gln Leu Glu Asp Ala Leu Lys Asp Val			
475	480	485	
cag aag aga atg tat gag tcg gaa ggt aaa gtg aaa caa atg cag aca			1900
Gln Lys Arg Met Tyr Glu Ser Glu Gly Lys Val Lys Gln Met Gln Thr			
490	495	500	
cat ttt ctt gcc ttg aaa gag cac ctg aca agt gat gcg gcc act ggg			1948
His Phe Leu Ala Leu Lys Glu His Leu Thr Ser Asp Ala Ala Thr Gly			
505	510	515	
aac cac agg ctg atg gag gaa ctg aag gat cag ttg aaa gac atg aaa			1996
Asn His Arg Leu Met Glu Glu Leu Lys Asp Gln Leu Lys Asp Met Lys			
520	525	530	535
gtg aaa tac gaa ggt gcg tcc gca gaa gtg ggg aaa ttg aga aac caa			2044
Val Lys Tyr Glu Gly Ala Ser Ala Glu Val Gly Lys Leu Arg Asn Gln			
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Ile Lys Gln Asn Glu Met Leu Val Glu Glu Phe Lys Arg Asp Glu Gly			
555	560	565	

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gaa ctg gag cga gag aag aga gga agg aag ctc act gag atg gaa ggc Glu Leu Glu Arg Glu Lys Arg Gly Arg Lys Leu Thr Glu Met Glu Gly 585 590 595	2188
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aaa ttt gaa aac atg aag agc ttg tta tca aat gaa ctg aac gag aag Lys Phe Glu Asn Met Lys Ser Leu Leu Ser Asn Glu Leu Asn Glu Lys 620 625 630	2284
gca aaa aaa tta ata gat gtg gaa aga gaa tat gaa aga tca ctt aat Ala Lys Lys Leu Ile Asp Val Glu Arg Glu Tyr Glu Arg Ser Leu Asn 635 640 645	2332
gaa act aga cca tta aag aga gaa ctt gag aat ttg aag gcc aaa ctg Glu Thr Arg Pro Leu Lys Arg Glu Leu Glu Asn Leu Lys Ala Lys Leu 650 655 660	2380
gct cag cac gtc aaa cca gag gaa cat gag cag ctc aag agc aga tta Ala Gln His Val Lys Pro Glu Glu His Glu Gln Leu Lys Ser Arg Leu 665 670 675	2428
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gtc cct tta aaa gta agt gaa gaa atg aaa aag tca cat gat gta att Val Pro Leu Lys Val Ser Glu Glu Met Lys Ser His Asp Val Ile 730 735 740	2620
gtt gat gat ttg aat aaa aag ctt tca gat gtg aca cac aaa tat aca Val Asp Asp Leu Asn Lys Lys Leu Ser Asp Val Thr His Lys Tyr Thr 745 750 755	2668
gaa aag aag ttg gaa atg gag aag ttg ctt atg gaa aat gcc agt tta Glu Lys Lys Leu Glu Met Glu Lys Leu Leu Met Glu Asn Ala Ser Leu 760 765 770 775	2716
agt aaa aat gtc agc cgc ctg gaa act gtg ttc ata cct ccc gag aga Ser Lys Asn Val Ser Arg Leu Glu Thr Val Phe Ile Pro Pro Glu Arg 780 785 790	2764
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tac aaa aaa agc cag gag gag att gtc acc ctg cat gag gag att gca Tyr Lys Ser Gln Glu Glu Ile Val Thr Leu His Glu Glu Ile Ala 940 945 950	3244
gcc cag aag aga gaa ctc gac acg ata cag gaa tgc atc aag cta aaa Ala Gln Lys Arg Glu Leu Asp Thr Ile Gln Glu Cys Ile Lys Leu Lys 955 960 965	3292
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Glu Ala Lys Lys Glu Lys Glu Lys Leu Val Glu Glu Asn Ala Lys Gln				
1065	1070	1075		
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Thr Ser Glu Ile Leu Ala Ala Gln Thr Leu Leu Gln Lys Gln His Val				
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ccg ctg gag cag gtt gag tcc ctg aaa aaa tct ctt agt ggt aca atc				3724
Pro Leu Glu Gln Val Glu Ser Leu Lys Lys Ser Leu Ser Gly Thr Ile				
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Glu Thr Leu Lys Glu Glu Leu Lys Thr Lys Gln Arg Cys Tyr Glu Lys				
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Gln Asn Thr Lys Gln Ala Leu Lys Lys Leu Glu Thr Arg Glu Val Val				
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Asp Leu Ser Lys Tyr Lys Ala Thr Lys Ser Asp Leu Glu Thr Gln Ile				
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Ser Asp Leu Asn Glu Lys Leu Ala Asn Leu Asn Arg Lys Tyr Glu Glu				
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Val Cys Glu Glu Val Leu His Ala Lys Lys Glu Leu Ser Ala Lys				
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Asp Glu Lys Glu Leu Leu His Phe Ser Ile Glu Gln Glu Ile Lys Asp				
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Gln Gln Glu Arg Cys Asp Lys Ser Leu Thr Thr Ile Thr Glu Leu Gln				
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Arg Arg Ile Gln Glu Ser Ala Lys Gln Ile Glu Ala Lys Asp Asn Lys				

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Ile Thr Glu Leu Leu Asn Asp Val Glu Arg Leu Lys Gln Ala Leu Asn			
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Ser Gln Leu Ile Asp Ser Leu Gln Gln Val Arg Ser Leu Gln Gln			
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Gln Leu Ala Asp Ala Asp Arg Gln His Gln Glu Val Ile Ala Ile Tyr			
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Arg Thr His Leu Leu Ser Ala Ala Gln Gly His Met Asp Glu Asp Val			
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cag gcc gcc tta ctg cag atc ata cag atg cgg cag ggg ctc gtg tgc			4588
Gln Ala Ala Leu Leu Gln Ile Ile Gln Met Arg Gln Gly Leu Val Cys			
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Lys Gly Asn Leu Glu Cys Leu Asn Ala Ile Leu Ile His Gly Val Asp			
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165 170 175			

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Leu Gly Cys Glu Tyr Gly Cys Lys Asp Ala Val Glu Val Leu Ile Lys
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Pro Ser Leu Gln Gln Arg Asn Leu Ser Gln Met Leu Asp Glu Val Asn
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Glu Val Met Val Ala Asp Asp Leu Glu Ser Glu Lys Glu Lys Leu Lys
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Ser Leu Leu Ala Ala Lys Glu Lys Gln His Glu Glu Ser Leu Arg Thr
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Lys Val Lys Gln Met Gln Thr His Phe Leu Ala Leu Lys Glu His Leu
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675	680	685
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Glu Lys Val Cys Leu Asp	Asn Lys Leu Leu Thr	Gln Gln Val Asn Asn
705	710	715
Leu Thr Thr Glu Met Lys	Asn Val Pro Leu Lys Val Ser	Glu Glu Met
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Lys Lys Ser His Asp Val	Ile Val Asp Asp Leu Asn Lys	Lys Leu Ser
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Asp Val Thr His Lys Tyr	Thr Glu Lys Leu Glu Met	Glu Lys Leu
755	760	765
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770	775	780
Val Phe Ile Pro Pro Glu	Arg His Glu Lys Glu Met Met	Ala Leu Lys
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Ser Asn Ile Thr Glu Leu Lys	Lys Gln Leu Ser Glu Leu Asn	Lys Lys
805	810	815
Cys Gly Glu Asp Gln Glu Lys	Ile Tyr Ser Leu Met Ser	Glu Asn Asn
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Glu Glu Ile Lys Thr Ala	Leu Ser Ser Thr Leu Asp Lys	Thr Asn Arg
850	855	860
Glu Leu Val Asp Val Lys	Lys Cys Glu Asp Ile Asn Gln Glu Phe	
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Val Lys Ile Lys Asp Glu	Asn Glu Ile Leu Lys Arg Asn Leu	Glu Asn
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Thr Gln Asn Gln Val Lys	Ala Glu Tyr Ile Ser Leu Arg	Glu His Glu
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Glu Lys Met Ser Gly Leu Arg	Lys Ser Met Lys Lys Val Gln Asp Asn	
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Ser Ala Glu Ile Leu Ala	Lys Tyr Lys Lys Ser Gln Glu Glu Ile Val	
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Cys Glu Arg Lys Phe Lys	Ala Thr Glu Lys Glu Leu Lys Glu Gln Leu	
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Ser Gln Gln Thr Gln Lys	Tyr Asn Thr Ser Glu Glu Ala Lys Lys	
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Cys Lys Gln Glu Asn Asp	Lys Leu Lys Glu Ile Leu Thr Leu Gln	
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Lys Asp Leu Lys Asp Lys	Asn Val His Ile Glu Asn Ser Tyr Glu Thr	
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Glu Arg Ala Leu Ser Arg	Lys Thr Glu Glu Leu Asn Arg Gln Leu Lys	
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Asp Leu Leu Gln Lys Tyr	Thr Glu Ala Lys Glu Lys Glu Lys Leu	
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Val Glu Glu Asn Ala Lys	Gln Thr Ser Glu Ile Leu Ala Ala Gln Thr	
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Leu Leu Gln Lys Gln His	Val Pro Leu Glu Gln Val Glu Ser Leu Lys	
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Lys Ser Leu Ser Gly	Thr Ile Glu Thr Leu Lys Glu Glu Leu Lys Thr	
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Lys Gln Arg Cys Tyr Glu	Lys Glu Gln Gln Thr Val Thr Gln Leu Arg	
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Gln Met Leu Glu Asn Gln Lys Asn	Ser Ser Val Pro Leu Ala Glu His	
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Leu Gln Val Lys Glu Ala Phe Glu Lys Glu Val Gly Ile Ile Lys Ala
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 Ser Leu Arg Glu Lys Glu Glu Ser Gln Asn Lys Thr Glu Glu Val
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 Gln Val Arg Ser Leu Gln Gln Leu Ala Asp Ala Asp Arg Gln His
 1345 1350 1355 1360
 Gln Glu Val Ile Ala Ile Tyr Arg Thr His Leu Leu Ser Ala Ala Gln
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